

# FEDERAL COMMUNICATIONS COMMISSION

CLASS OF STATION FM

RICKY

The following application is submitted for action by the Chief, Broadcast Bureau.

ST	FILE NUMBER	CALL	APPLICANT AND LOCATION	NATURE OF APPLICATION
GA	BPED -860205MD N/M	NEW 91.3MHZ	BOARD OF TRUSTEES SHORTER COLLEGE ROME GA	CP FOR NEW EDUC. FM ON: FREQUENCY: 91.3 MHZ.; #217, ERP: 4.4 KW H&V; HAAT: 40 METERS H&V, TL: WATER TOWER AT SHORTER COLLEGE, ROME, GA; SL/RC: TO BE DETERMINED 34 15 25 85 11 50

LICENSE EXPIRATION DATE \_\_\_\_\_

\_\_\_\_\_  
CHIEF, LICENSE DIVISION

RECOMMENDATION: GRANT( ) CONSTRUCTION DATES, START \_\_\_\_\_ END \_\_\_\_\_  
 CONTESTED ( ) UNCONTESTED ( )

APPROVED \_\_\_\_\_

\_\_\_\_\_  
FOR CHIEF, BROADCAST BUREAU

F.C.C.-WASHINGTON, D.C.

RECEIVED

Approved by OMB  
3060-0034  
Expires 9/30/87

**APPLICATION FOR CONSTRUCTION PERMIT FOR  
NONCOMMERCIAL EDUCATIONAL BROADCAST STATION**  
(Carefully read instructions before filling out Form—RETURN ONLY FORM TO FCC SERVICES DIVISION)

FEB 5 10 20 AM '86  
File No. 860205MD  
FCC SERVICES DIVISION

**Section I**

**General Information**

**1. Name of Applicant**

**Street Address**

Board of Trustees  
Shorter College

Shorter Hill

**City**

**State**

**ZIP Code**

**Telephone No.**

(Include Area Code)

Rome

GA

30161-9989

404-291-2121

Send notices and communications to the following named person at the address below:

**Name**

**Street Address**

Dr. Denis E. Vogel  
Shorter College

Shorter Hill

**City**

**State**

**ZIP Code**

**Telephone No.**

(Include Area Code)

Rome

GA

30161-9989

404-291-2121

2. This application is for: ☐ AM ☒ FM ☐ TV

(a) Channel No. or Frequency: 217

(b) Community of license:

**City**

**State**

Rome

GA

(c) Check one of the following boxes:

- ☒ Application for new station  
☐ Major Change in Existing station; call sign: \_\_\_\_\_  
☐ Minor Change in Existing station; call sign: \_\_\_\_\_  
☐ Modification of Construction Permit; File No. of CP: \_\_\_\_\_  
☐ Amendment to Pending Application; Reference Number (ARN): \_\_\_\_\_

**NOTE:** It is not necessary to use this form to amend a previously filed application. Should you do so, however, please submit only Section I and those other portions of the form that contain the amended information.

3. Is this application mutually exclusive with a renewal application?

☐ YES ☒ NO

If Yes, State:

Call letters:

Community of license:

**City**

**State**

Applicants are reminded that questions 4 through 5 of this Section must be completed as to all "parties to this application" as that term is defined in the instructions to Section II of this form.

Table I Parties To Application

4. Complete Table I with respect to all parties to this application.

(Note: If the applicant considers that to furnish complete information would pose an unreasonable burden, it may request that the Commission waive the strict terms of this requirement with appropriate justification)

INSTRUCTIONS: If applicant is partnership, fill out columns (a), (b), and (d), stating as to each general or limited partner (including silent partners): (a) name and residence, (b) nature of partnership interest (i.e., general or limited), and (d) percent of ownership interest. If applicant is a corporation or an unincorporated association with 50 or fewer stockholders, stock subscribers, holders of membership certificate or other ownership interest, fill out all columns, giving the information requested as to all officers, directors and members of governing board. In addition, give the information as to all persons or entities who are the beneficial or record owners of or have the right to vote capital stock, membership or ownership interests or are subscribers to such interests. If the applicant has more than 50 stockholders, stock subscribers or holders of membership certificates or other ownership interests, furnish the information as to officers, directors, members of governing board, and all persons or entities who are the beneficial or record owners of or have the right to vote 1% or more of the capital stock, membership or ownership interest. If applicant is governmental or public educational agency or institution, fill out columns (a) and (c) as to all members of the governing board and chief executive.

Name and Residence Address(es)  (a)	Nature of Partnership Interest or Office Held  (b)	Director or Member of Governing Board		% of: Ownership (O) or Partnership (P) or Voting Stock (VS) or Membership (M)  (d)
		YES	NO	
		(c)		
Dr. George L. Balentine, President Shorter Hill, Shorter College Rome, GA 30161			X	
Dr. Lee H. Battle, Jr. 1803 Old Summerville Rd., N.W. Rome, GA 30161		X		
Dr. J. Edward Dempsey 2 Tanglewood Court Athens, GA 30606		X		
Rev. Charles C. Duncan 951 Bingham Lane Stone Mountain, GA 30083		X		
Dr. Buford Harbin 1825 Martha Berry Blvd. Rome, GA 30161		X		
Mr. George E. Smith 5295 London Drive, N.W. Atlanta, GA 30327		X		
Mr. Jackson P. Turner 215 W. Cuyler St. Dalton, GA 30722		X		

Name of Applicant

Shorter College

## 1. (a) Applicant is: (Check one box below)

- ☐ a general partnership operating on a nonprofit basis ☐ a nonprofit corporation
- ☐ a limited partnership operating on a nonprofit basis ☐ Other (specify)
- ☒ a governmental or public educational agency or institution

If the applicant is an unincorporated association or a legal entity other than a partnership, nonprofit corporation, or a governmental or public educational agency or institution, describe in Exhibit No. \_\_\_\_ the nature of the applicant.

- (b) Is there any provision contained in any by-laws, articles of incorporation, partnership agreement, charter, statute or any other document which would restrict the applicant in advancing an educational program or complying with any Commission rule, policy or provision of the Communications Act of 1934, as amended. ☐ YES ☒ NO

If Yes, provide particulars as Exhibit No. \_\_\_\_ .

- (c) Does the applicant certify that copies of all pertinent documents set out in (b) are in the public inspection file? ☒ YES ☐ NO

Describe in Exhibit No. 1 how the proposed station will be used for the advancement of an educational program. This does apply if applicant is applying for change in facilities.

## Citizenship And Other Statutory Requirements

2. (a) Is the applicant in compliance with the provisions of Section 310 of the Communications Act of 1934, as amended, relating to interests of aliens and Foreign governments? ☒ YES ☐ NO

- (b) Will any funds, credits, etc., for the construction, purchase or operation of the station be provided by aliens, foreign entities, domestic entities controlled by aliens, or their agents? ☐ YES ☒ NO

If yes, provide particulars as Exhibit No. \_\_\_\_ .

3. (a) Has an adverse finding been made, adverse final action taken or consent decree approved by any court or administrative body as to the applicant or any party to the application in any civil or criminal proceeding brought under the provisions of any law related to the following subjects:  
Any felony, antitrust, unfair competition, fraud, unfair labor practices or discrimination? ☐ YES ☒ NO

- (b) Is there now pending in any court or administrative body any proceeding involving any of the matters referred to in (a)? ☐ YES ☒ NO

If the answer to (a) or (b) above is Yes, attach as Exhibit No. \_\_\_\_ , a full disclosure concerning the persons and matters involved, identifying the court or administrative body and the proceeding (by dates and file numbers), stating the facts upon which the proceeding was based or the nature of the offense committed, and disposition or current status of the matter.

	YES	NO
Mr. Owen Herrin, Jr. P. O. Box 1279 Waycross, GA 31502	x	
Mr. J. L. Todd P. O. Box 553 Rome, GA 30161	x	
Dr. Warren Moorhead 201 N. Main St. LaFayette, GA 30728	x	
Rev. Robert L. Whitmire 576 Patty Court Lithia Springs, GA 30143	x	
. . David Whitworth P. O. Box 1996 Brunswick, GA 31521	x	
Mr. Robert G. Wyatt P. O. Box 986 Rome, GA 30161	x	
Rev. Larry Draper 123 Rolling Oaks Drive Rome, GA 30161	x	
Mr. George B. Houston 2104 Luray Court Dunwoody, GA 30338	x	
. Kenneth Mauldin 4022 Toccoa Ave. Columbus, GA 31907	x	
Dr. Carl McCurdy Route 3, Box 130 Jasper, GA 30143	x	
Mr. Austin Moses 10 Robin St. Rome, GA 30161	x	
Mrs. F. H. Searcy 1610 E. Clay St. Thomasville, GA 31792	x	
Mr. Alfred Lee Barron, Jr. 13 Rivermont Drive Rome, GA 30161	x	
Mr. Terry McKenna 31 Meadow Way Covington, GA 30209	x	

	YES	NO
Mr. A. Roy Roberts, Jr. Route 6, Heights Place Canton, GA 30114	x	
Dr. Floyd Roebuck 27 Virginia Circle Rome, GA 30161	x	
Mr. J. Roger Sumner 514 Mt. Alto Road Rome, GA 30161	x	
Mrs. Rupert A. Triplitt 2730 Averett Drive Columbus, GA 31906	x	
Mr. Roy M. Echols 1 Bells Ferry Rd., N.E. Rome, GA 30161	x	
Mr. J. R. Eubanks 1230 Peachtree Battle Ave., N.W. Atlanta, GA 30327	x	
Dr. J. Hoffman Harris 2986 East Ramble Lane Decatur, GA 30033	x	
Mr. O. C. Hubert 429 North Woodland Drive, N.E. Marietta, GA 30064	x	
Mr. J. T. Roe III 18 Arden at Argonne, N.E. Atlanta, GA 30305	x	
Dr. M. Carolyn Ward 1596 Lancaster Drive Marietta, GA 30066	x	

5. Has the applicant or any party to this application had any interest in:

- (a) a broadcast application which has been dismissed with prejudice by the Commission? ☐ YES ☒ NO
- (b) a broadcast application which has been denied by the Commission? ☐ YES ☒ NO
- (c) a broadcast station, the license of which has been revoked? ☐ YES ☒ NO
- (d) a broadcast application in any Commission proceeding which left unresolved character issues against that applicant? ☐ YES ☒ NO
- (e) If the answer to any of the questions above is Yes, attach Exhibit No. \_\_\_\_ , stating the following information:
- (1) Name of party having such interest;
  - (2) Nature of interest or connection, giving dates;
  - (3) Call letters of stations or file number of application, or docket number;
  - (4) Location.

#### Ownership and Control

6. Are there any documents, instruments, contracts, or understandings relating to ownership or future ownership rights (including, but not limited to, non-voting stock interests, beneficial stock ownership interest) or control? ☐ YES ☒ NO
- If Yes, provide particulars as Exhibit No. \_\_\_\_ .
7. Do documents, instruments, agreements or understandings for the pledge of stock of a corporate applicant, as security for loans or contractual performance, provide that (a) voting rights will remain with the applicant, even in the event of default on the obligation; (b) in the event of default, there will be either a private or public sale of the stock; and (c) prior to the exercise of stockholder rights by the purchaser at such sale, the prior consent of the Commission [pursuant to 47 U.S.C. 310(d)] will be obtained? ☒ YES ☐ NO
- If No, attach as Exhibit No. \_\_\_\_ , a full explanation.

**Section III****Financial Qualifications**

Note: If this application is for a change in an operating facility, **DO NOT** fill out this section.

1. Is this application contingent upon receipt of a grant from the National Telecommunications and Information Administration? ☐ YES ☒ NO
2. Is this application contingent upon receipt of a grant from a charitable organization, the approval of the budget of a school or university, or an appropriation from a state, county, municipality or other political subdivision? ☐ YES ☒ NO

NOTE: If either 1 or 2 is answered "Yes", your application cannot be granted until all of the necessary funds are committed or appropriated. In the case of grants from the National Telecommunications and Information Administration no further action on your part is required. If you rely on funds from a source specified in Question 2, *you must advise the F.C.C. when the funds are committed or appropriated*. This should be accomplished by letter amendment to your application, in triplicate, signed in the same manner as the original application, and clearly identifying the application to be amended.

3. Except as indicated in Questions Numbered 1 and 2 above, the applicant certifies that:
- (a) It has a reasonable assurance of present commitments from each donor, from each party agreeing to furnish capital, from each bank, financial institution or others agreeing to lend funds, and from each equipment supplier agreeing to extend credit: ☒ YES ☐ NO
- (b) It can and will meet all contractual requirements as to collateral, guarantees, and capital investments or donations: ☒ YES ☐ NO
- (c) It has determined that a reasonable assurance exists that all such sources (excluding banks, financial institutions, and equipment manufacturers) have sufficient net liquid assets to meet these commitments. ☒ YES ☐ NO
4. The applicant certifies, except as noted above, that sufficient net liquid assets are on hand or available from committed sources to construct and operate the requested facilities for three months without additional funds. ☒ YES ☐ NO

**Section IV****Program Service Statement**

For AM, FM and TV Applications

Attach as Exhibit No. 2, the applicant's purpose and objective in establishing the proposed station and a statement of proposed program policies. If applicant already has such information on file, indicate file number and detail changes, if any.



Name of Applicant Shorter College

1. Purpose of authorization applied for:

☒ Construct a new station

☐ Install Auxiliary system

Change:

☐ Effective radiated power

☐ Frequency

☐ Antenna height above average terrain

☐ Transmitter location

☐ Studio location outside community of license

☐ Other (Summarize briefly the nature of the changes proposed.)

2. Community of license:

State  
Georgia

City or Town  
Rome

3. Facilities requested:

Frequency

Channel No.

Class (Check one below)

91.3 MHz 217

☐ A ☐ B ☐ B1  
☐ C ☐ C1 ☒ C2 ☐ D

4. Geographic coordinates of antenna (to nearest second)

North Latitude 34<sup>°</sup> 15' 25"

West Longitude 85<sup>°</sup> 11' 50"

5. Effective radiated power:

Polarization

Horizontal Plane

Maximum (Beam tilt only)

Horizontal

4.4 kW

N/A kW

Vertical

4.4 kW

N/A kW

6. Height in meters of antenna radiation center:

	<u>Above Average terrain (HAAT)</u>		<u>Above Mean Sea Level</u>		<u>Above Ground</u>	
Horizontal	<u>40</u>	meters	<u>265.2</u>	meters	<u>30.5</u>	meters
Vertical	<u>40</u>	meters	<u>265.2</u>	meters	<u>30.5</u>	meters

7. Is a directional antenna being proposed?

☐ YES ☒ NO

If Yes, attach as Exhibit No. N/A an engineering statement with all data specified in Section 73.316(d) of the Commission's Rules.

8. Transmitter location: State Georgia County Floyd  
City or Town Rome Street Address (or other identification) Water tower at Shorter College

9. Overall height of complete structure above ground, including all appurtenances and lighting (if any, see Part 17). 31.1 meters

Eng.

10. Attach as Exhibit No.      map(s) (Sectional Aeronautical charts or equivalent) of the area proposed to be served and shown thereon:

- (a) Proposed transmitter location and the radials along which the profile graphs have been prepared;
- (b) The 1mV/m predicted contour;
- (c) Area (sq. mi.) and population (latest census) within 1 mV/m contour;
- (d) Scale of miles or kilometers (kilometers if available).

11. Attach as Exhibit No. N/A a map (Sectional Aeronautical charts where obtainable) showing the present and proposed 1 mV/m (60 dbu) contours.

Enter the following from Exhibit above: N/A Gain Area      sq. mi.  
Loss Area      sq. mi.

Percent change (gain area plus loss area as percentage of present area)      %.  
If 50% or more this constitutes a major change. Indicate in question 2(e), Section I, accordingly. N/A

12. If the main studio will not be within the boundaries of the principal community to be served, attach as Exhibit No. N/A a justification pursuant to Section 73.1125(f) of the Commission's Rules.

13. Attach as Exhibit No. Eng. map(s) (7.5 minute U.S. Geographic Survey topographic quadrangles if available) of the proposed antenna location showing the following information:

- (a) Proposed transmitter location accurately plotted with the latitude, the longitude lines clearly marked and showing a scale of statute kilometers.
- (b) Transmitter location and call letters of all AM broadcast stations within 2 miles of the proposed antenna location.

14. If there are any FM or TV stations within 200 feet of proposed antenna or non-broadcast radio stations (except amateur and citizens band), or established commercial and government receiving stations in the general vicinity which may be adversely affected by the proposed operation, attach as Exhibit No. N/A the expected effect, a description of remedial steps that may be pursued if necessary, and a statement from the applicant accepting full responsibility for the elimination of any objectionable effect on existing stations.

15. Tabulation of Terrain Data. (Calculated in accordance with the procedure prescribed in Section 73.313 of the Commission's Rules utilizing 7.5 minute topographic maps, if available.)

Radial bearing (degrees true)	Height of antenna, radiation center above average elevation of radial (3-16 kilometers) Meters	Predicted Distance
		To the 1 mV/m contour Kilometers
0°	63.3	21.1
45°	60.5	20.7
90°	44.5	17.7
135°	33.8	15.6
180°	23.7	14.6
225°	29.6	14.6
270°	56.2	20.0
315°	12.3	14.6

#### Allocation Studies

(See Subpart C of Part 73 of the Commission's Rules and Regulations)

16. Is the proposed antenna location within 320 kilometers (199 miles) of the common border between the United States and Mexico? ☐ Yes ☒ No

If Yes, attach as Exhibit No. N/A a showing of compliance with all provisions of the Agreement between the United States of America and the United Mexican States concerning Frequency Modulation Broadcasting in the 88 to 108 MHz band.

17. With regard to stations within 320 kilometers (199 miles) of the common border between the United States and Mexico, attach as Exhibit No. N/A information required in 1/.

18. If the proposed operation is for a channel in the range from channel 201 through 220 (88.1 through 91.9 MHz), then with regard to stations more than 320 kilometers (199 miles) from the common border between the United States and Mexico or if this proposed operation is for a class D station in the range from Channel 221 through 300 (92.1 through 107.9 MHz), attach as Exhibit No. Fig a complete allocation study to establish the lack of prohibited overlap of contours involving these stations. The allocation study should include the following:

- The normally protected interference-free and the interfering contours for the proposed operation along all azimuths.
- Complete normally protected interference-free contours of all other proposals and existing stations to which objectionable interference would be caused.
- Interfering contours over pertinent arcs of all other proposals and existing stations from which objectionable interference would be received.
- Normally protected and interfering contours over pertinent arcs, of all other proposals and existing stations, which require study to show the absence of objectionable interference.
- Plot of the transmitter location of each station or proposal requiring investigation, with identifying call letters, file numbers and operating or proposed facilities.
- When necessary to show more detail, an additional allocation study will be attached utilizing a map with a larger scale to clearly show interference or absence thereof.
- A scale of miles and properly labeled longitude and latitude lines, shown across the entire (Exhibit(s)). Sufficient lines should be shown so that the location of the sites may be verified.
- The name of the map(s) used in the exhibit(s).

- 1/ A showing that the proposed operation meets the minimum distance separation requirements. If any separations are proposed that are less than the applicable minimum separation requirements plus 15 kilometers, include these stations. Also include existing stations, proposed stations, and cities which appear in the Table of Assignments; the location and geographic coordinates of each antenna, proposed antenna or reference point, as appropriate; and distance to each from proposed antenna location.

19. Is the proposed antenna location within 320 kilometers of the common border between the United States and Canada? ☐ Yes ☒ No  
If Yes, attach as Exhibit No. N/A a showing of compliance with all provisions of the Working Agreement for Allocation of FM Broadcasting Stations on Channels 201-300 under The Canada-United States FM Agreement of 1947.

20. With regard to station separated by 53 or 54 channels (10.6 or 10.8 MHz) attach as Exhibit No. N/A information required in 1/(separation requirements involving intermediate frequency [i.f.] interference).

21. Is the proposed operation on Channel 218, 219 or 220? ☐ Yes ☒ No  
If Yes, attach as Exhibit No. N/A information required in 1/ regarding separation requirements with respect to stations on Channels 221, 222, and 223.

22. Is the proposed station for a channel in the range from Channel 201 to 221 (88.1-91.9 MHz) and the proposed antenna location within the Grade B contour of a channel 6 television station or sufficiently near the Grade B contour that a question of interference to channel 6 may be raised? ☒ Yes ☐ No  
If Yes, attach as Exhibit No. Eng a map showing the Grade B contour of the television station and the proposed antenna location. Also include discussion of the possibility of interference to the Channel 6 station and the steps proposed to remedy any interference which may occur.

23. Is the proposed station for a channel in the range from Channel 221 to 300 (92.1-107.9 MHz)? ☐ Yes ☒ No  
If Yes, attach as Exhibit No. N/A information required in 1/ (Except for class D [secondary] proposals.)

24. If the proposed antenna location is in or near a populated area, attach Exhibit No. Eng a discussion of blanketing and the steps proposed to remedy any interference which may occur.

25. Environmental Statement, See Part I, Subpart 1 of the Commission's Rules.

Would a Commission grant of this application be a major action as defined by Section 1.1305 of the Commission's Rules? ☐ Yes ☒ No

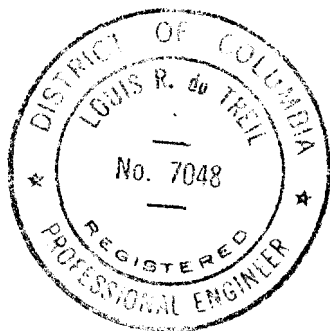
If Yes, attach as Exhibit No. \_\_\_\_ a narrative statement in accordance with Section 1.1311 of the Commission's Rules.

If No, explain briefly. Overall height of antenna and support structure is less than 300 feet.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

November 20, 1985

Date



Louis R. du Treil, P. E.

Name

*Louis R. du Treil*

Signature (check appropriate box below)

1200 18th Street, N.W., Suite 607

Address (include ZIP Code)

Washington, D.C. 20036

(202) 659-3055

Telephone No. (include Area Code)

☐ Technical Director

☒ Registered Professional Engineer

☐ Chief Operator

☐ Technical Consultant

☐ Other (Specify)

## Section V-G

## Antenna and Site Information

Name of Applicant Shorter College	Call Sign New	Station Location Rome, Georgia
Purpose of Application (Put "X" in appropriate box)		Facilities Requested
<input checked="" type="checkbox"/> New antenna construction <input type="checkbox"/> Alteration of existing antenna structure <input type="checkbox"/> Change in location		CH 217C2, 4.4 kW, 40 meters

1. Location of Antenna:
- |                  |                 |                      |
|------------------|-----------------|----------------------|
| State<br>Georgia | County<br>Floyd | City or Town<br>Rome |
|------------------|-----------------|----------------------|

Exact antenna location (*street address*). If outside city limits, give name of nearest town and distance and direction of antenna from town.

Atop water tower at Shorter College.

Geographical coordinates (*to nearest second*). For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	34° 15' 25"	West Longitude	85° 11' 50"
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2. Is the proposed site the same transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? ☐ YES ☒ NO

If Yes, give call sign: N/A

3. Has the FAA been notified of proposed construction? ☐ YES ☒ NO

If Yes, give date and office where notice was filed. Overall height is less than 200 feet.

4. List all landing areas within 5 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.

Landing Area	Distance	Direction
(a) None		
(b)		
(c)		

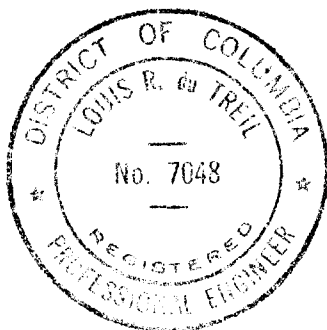
5. Attach as Exhibit No. Eng a description of the antenna system, including whether tower(s) are self-supporting or guyed. If a directional antenna, give spacing and orientation of towers.

Tower		#1	#2	#3	#4	#5	#6
Overall height above ground (include obstruction lighting)	meters	31.1					
	feet	102					
Overall height above mean sea level (include obstruction lighting)	meters	265.8					
	feet	872					

6. Attach as Exhibit No. Eng a vertical plan sketch for the proposed total structure (including supporting building, if any) giving heights above ground in feet and meters for all significant features. Clearly indicate existing portions, noting lighting, and distinguish between the skeletal or other main supporting structure and the antenna elements.

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

November 20, 1985



Louis R. du Treil, P. E.

Louis R. du Treil  
Name

Signature (Check appropriate box below)

1200 18th Street, N.W., Suite 607

Address (include ZIP Code)

Washington, D.C. 20036

(202) 659-3055

Telephone No. (Include Area Code)

☐ Technical Director

☒ Registered Professional Engineer

☐ Other (specify)

☐ Technical Consultant

☐ Chief Operator

ENGINEERING EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
SHORTER COLLEGE  
ROME, GEORGIA

November 20, 1985

CH 217C2      4.4 KW      40 M

ENGINEERING EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
SHORTER COLLEGE  
ROME, GEORGIA  
CH 217C2            4.4 KW            40 M

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Certification of Louis R. du Treil, P. E.



ENGINEERING EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
SHORTER COLLEGE  
ROME, GEORGIA  
CH 217C2      4.4 KW      40 M

Engineering Statement

The engineering exhibit of which this statement is part was prepared on behalf of Shorter College in support of an application for a new non-commercial FM broadcast station to serve Rome, Georgia. The proposed station will operate on channel 217C2 with effective radiated power of 4.4 kilowatts and antenna height above average terrain of 40 meters.

The proposed construction is a minor environmental action as defined in the FCC Rules and Regulations. Notification to the Federal Aviation Administration is not required. The instant application conforms with all applicable FCC Rules and Regulations. Specifications for the proposed operation are included herein as Figure 1.

Proposed Transmitter Location

A 1-bay antenna will be top mounted on an existing water tower located on the campus of Shorter College. A sketch of the proposed antenna and supporting

Engineering Statement  
Rome, Georgia

structure is included herein as Figure 3. The proposed tower is uniquely described by the following geographic coordinates which were obtained from the "Rome North, Ga." quadrangle map:

34° 15' 25" North Latitude

85° 11' 50" West Longitude.

The Rome North, Ga. quadrangle map showing the proposed site and vicinity is included herein as Figure 2. Rome, Georgia AM stations WLAQ (1410 kHz, 1 kW, DA-N, U) and WIYN (1360 kHz, 5 kW, D) are located 0.8 kilometer and 1.8 kilometers, respectively from the proposed FM transmitter location. The proposed antenna will add only 3.7 meters to the height of an existing water tower; therefore, no adverse impact is expected to the radiation patterns of WLAQ and WIYN. Experience shows that a structure such as a water tower exhibits poor AM radiation characteristics. The addition of the small FM antenna does not change that conclusion.

Coverage Contours

The predicted coverage contours were calculated in accordance with the provisions of Section 73.313 of the FCC Rules and Regulations. No consideration was given to the terrain roughness correction factors.

The average elevations from 3 to 16 kilometers

Engineering Statement  
Rome, Georgia

from the proposed site were determined from the NGDC 30-second terrain elevation database. The standard eight radials evenly spaced at 45-degree intervals were used in determining the average elevations and the distances to the coverage contours. These values are tabulated in Figure 5 of this exhibit.

The antenna radiation center height above average terrain in the individual radial directions and the ERP were used in conjunction with the F(50,50) curves of Section 73.333 of the FCC Rules and Regulations to determine the distances to the normally protected 60 dBu contour. All interfering contours were calculated in the same fashion using the F(50,10) curves. The F(50,50) curves were used for distances less than 15 kilometers.

Allocation Considerations

The proposal meets all required allocation standards with respect to existing and proposed stations and all separation requirements involving intermediate frequency interference. There will be no interference within the normally protected 60 dBu contour of the proposal, nor will the proposal cause objectionable interference to any existing or proposed stations. Figure 6 is a map showing pertinent stations considered.

A detailed study of the potential interference to television channel 6 station WBRC-TV was conducted based upon the rules adopted on June 20, 1985. Objectionable interference will not be caused to WBRC-TV anywhere within its normally protected service area.

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Engineering Statement  
Rome, Georgia

According to the new rules, the 47 dBu (Grade B) F(50,50) contour of WBRC-TV is protected. The WBRC-TV 47 dBu contour extends to a distance of 114.2 kilometers based upon maximum ERP and actual terrain in the direction of the proposed site.

The channel 217 undesired to desired (U/D) protection ratio for a WBRC-TV field strength of 47 dBu is 29 dB as read from Figure 2. An adjustment for television receiving antenna directivity of 6 dB is added, as specified in the new rules, since any potential interference will occur well outside of the WBRC-TV Grade A contour. Adding these values to the WBRC-TV protection contour value of 47 dBu gives 82 dBu, which is the level of the proposed signal strength that would be required to interfere with WBRC-TV.

From the proposed site, the actual terrain value of 38.5 meters HAAT is used with the maximum power of 4.4 kW, to yield a distance of 4.7 kilometers to the 82 dBu contour. The total distance to WBRC-TV from the proposed site is 170.8 kilometers. Thus, separation of 51.9 kilometers exists between the desired 47 dBu contour of WBRC-TV and the undesired 82 dBu contour of the proposed operation.

At accessible locations on the ground, the calculated power density will be well below the value specified in the OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human

Engineering Statement  
Rome, Georgia

Exposure to Radiofrequency Radiation." The proposal therefore complies with FCC Rules regarding exposure of humans to nonionizing radiation.



*Louis R. du Treil*  
Louis R. du Treil, P. E.

November 20, 1985

ENGINEERING EXHIBIT  
APPLICATION FOR FM CONSTRUCTION PERMIT  
SHORTER COLLEGE  
ROME GEORGIA  
CH 217C2            4.4 KW            40 M

Engineering Specifications

Channel	217C2
Frequency Band	91.3 MHz
Site coordinates	34° 15' 25" North Latitude 85° 11' 50" West Longitude
Site elevation above mean sea level	234.7 m
Average elevation above mean sea level of eight evenly spaced radials, 2 - 10 miles	224.7 m
Overall height of water tower Above ground	27.4 m
Height of FM antenna radiation center	
Above ground	30.5 m
Above mean sea level	265.2 m
Above average terrain	40.5 m (rounded to 40 m)
Transmitter	Harris, type, FM-10K
Rated power output	10 kW

Transmission line	Cablewave Systems, type HCC158-50J
Nominal diameter	4.13 cm
Rated power input at 91.3 MHz	17 kW
Length	30.6 m
Efficiency (0.22 dB loss)	95.1%
Antenna	Harris, type FMH-1AE
Number of bays	1
Polarization	Circular
Power gain	
Horizontal polarization	0.46
Vertical polarization	0.46

Proposed Operation

Transmitter output power	10.0 kW
Transmission line loss	0.49 kW
Antenna input power	9.51 kW
Effective radiated power (Circular polarization)	4.37 kW (rounded to 4.4 kW)

DECEMBER 1985

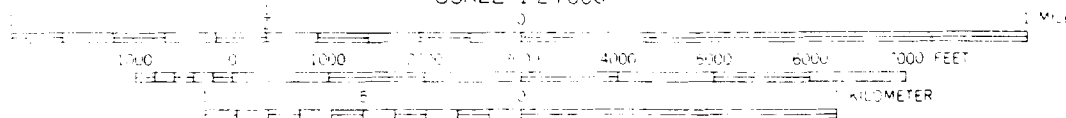
## ROME NORTH, GA.

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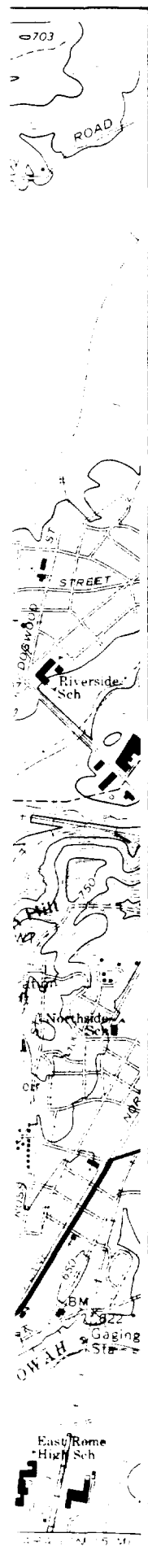
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CONTOUR INTERVAL 10 FEET  
 DATUM IS MEAN SEA LEVEL

**PROPOSED SITE AND VICINITY****SHORTER COLLEGE****ROME, GEORGIA****CH 217C2 4.4 KW 40 M**

duTreil - Rackley Consulting Engineers





DECEMBER 1985

